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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,220	11/27/2003	Kenji Oe	ND-US030885	1219

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EXAMINER

SMITH, TYRONE W

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/707,220

Applicant(s)

OE, KENJI

Examiner

Tyrone W. Smith

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6 and 9 is/are rejected.
- 7) ☒ Claim(s) 3,4,7 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/27/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 1 (items M1 and C1-C3), Figure 4 (items 36-43 and 231, 241, 251), Figure 2 (items 24, 26, 27, 32 and 33). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. Examiner requests that the Applicant thoroughly refer to the specification and drawings in order to modify any mistakes that would impede prosecution.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5 and 9 rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al (6274992).

Regarding Claims 1, 5 and 9. Wang discloses a braking method for a single-phase motor, which includes a position-detecting portion (Figure 1 item 10) for producing two output signals having different phases that correspond to a rotational position of the rotor; a current controlling portion (Figure 1 item 30) for controlling current supply to the winding in accordance with and the output signal of the position detecting portion; and a phase advancing portion (Figure 1 item 30) for receiving two output signals from the position detecting portion and for producing two phase-advanced output signals in which the phases of the output signals are advanced, wherein the two phase-advanced output signals of the phase advancing portion are supplied within the current controlling portion so that the timing for supplying current to the winding is advanced. Examiner believes by Applicants claims and disclosure that the use of the phase advancing portion advances two phase advanced output signals for controlling the motor is within Wang's motor driving circuit. By definition, claims and disclosure, the motor driving unit is receiving and advancing signals, further controlling two-phase signal outputs for motor control (timing). Refer to column 2 lines 49-67 and column 3 lines 1-20.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5, 6 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art of Record (Figure 5) in view of Tamae et al (4818908).

Regarding Claims 1, 5 and 9. Admitted Prior Art of Record (Figure 5) includes position-detecting portion (Figure 5 item 11) for producing two output signals having different phases that correspond to a rotational position of the rotor and a current controlling portion (Figure 5 item 12) for controlling current supply to the winding in accordance with and the output signal of the position detecting portion. However, the Admitted Prior Art of Record (Figure 5) does not disclose a a phase advancing portion (Figure 1 item 30) for receiving two output signals from the position detecting portion and for producing two phase-advanced output signals in which the phases of the output signals are advanced, wherein the two phase-advanced output signals of the phase advancing portion are supplied to the current controlling portion so that the timing for supplying current to the winding is advanced.

Tamae discloses a brushless motor having phase advanced which includes a phase advancing portion (Figure 1 item 36) for receiving output signals from the position detecting portion and for producing phase-advanced output signals in which the phases of the output signals are advanced, wherein the phase-advanced output signals of the phase advancing portion are supplied within the current controlling portion so that the timing for supplying current to the winding is advanced. Refer to column 5 lines 65-68 and column 6 lines 1-12.

M.P.E.P 2144.04 [R-1] Legal Precedent as Source of Supporting Rationale. Omission of an Element with Retention of the Element's Function Is an Indicia of Unobviousness: Note that the omission of an element and retention of its function is indicia of unobviousness. In re Edge, 359 F.2d 896, 149 USPQ 556 (CCPA 1966) (Claims at issue were directed to a printed sheet having a thin layer of erasable metal bonded directly to the sheet wherein said thin layer obscured the original print until removal by erasure. The prior art disclosed a similar printed

sheet, which further comprised an intermediate transparent, and erasure-proof protecting layer, which prevented erasure of the printing when the top layer was erased. The claims were found unobvious over the prior art because the although the transparent layer of the prior art was eliminated, the function of the transparent layer was retained since appellant's metal layer could be erased without erasing the printed indicia.). Examiner found that the omission of one or two phases does not take away from the purpose of the current invention, which uses a phase advancing portion, in controlling a brushless motor.

It would have been obvious to one of ordinary skill in the art at the time of invention to add Tamae's invention of a brushless motor having phase advance with the Admitted Prior Art of Record (Figure 5). The advantage of combining the two would provide a means for advancing the phase of positional signal by an advancing amount of the sum of the velocity signal and the selected positional signal.

Regarding Claims 2 and 6. The Admitted Prior Art of Record (Figure 5) discloses a current controlling portion includes a drive circuit having a pair of differential input terminals for controlling current supply to with the output signal the winding in accordance of the position detecting portion.

It would have been obvious to one of ordinary skill in the art at the time of invention to add Tamae's invention of a brushless motor having phase advance with the Admitted Prior Art of Record (Figure 5). The advantage of combining the two would provide a means for advancing the phase of positional signal by an advancing amount of the sum of the velocity signal and the selected positional signal.

Allowable Subject Matter

6. Claims 3, 4, 7 and 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

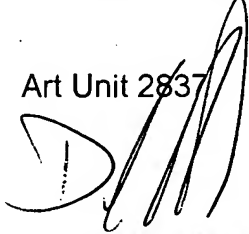
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent prior(s) of record is disclosed in the PTO-892.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W. Smith whose telephone number is 571-272-2075. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on 571-272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tyrone Smith
Patent Examiner

Art Unit 2837

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